Appendix D3. Birds

RESPONSE TO QUERIES FROM PHLF

Overview of Potentially Affected Species

BRD 1. *White-Tailed Kite (Elanus leucurus)*
The resource specialist recommends that, because the Phase II expansion area provides potential nesting and foraging habitat for white-tailed kites, the introduction of vole populations would likely benefit White-tailed Kite populations. This recommendation would be appropriate for mitigation areas but not for the Phase II landfill expansion site.

The original recommendation was to manage habitat to favor voles, rather than to introduce them; the area of management was not specified but is now changed in the revised document to refer to mitigation parcels.

BRD 2. *Loggerhead Shrike (Lanius ludovicianus)*
The resource specialist is concerned that development of the proposed power station on the Griffith Ranch parcel adjacent to a eucalyptus grove would result in increased mortality rates resulting from avian collisions with vehicles accessing the power plant. Vehicular speeds along the power plant access road would be minimal (approximately 15 miles per hour on graveled roads), and the low frequency of vehicular travel along the access road (i.e., 2 or 3 vehicle round trips per day) is not anticipated to significantly increase the mortality rate of the Loggerhead Shrike.

With the decision, after submission of the panel's report, to change the location of the power plant to within the Phase I parcel, this particular concern for shrikes appears to be no longer relevant. It is unclear, to me at least, what the level of traffic is projected to be on road(s) to the sedimentation ponds on the Griffith Ranch parcel. Presumably, most traffic would be during the construction phase; but collisions with shrikes should still be a concern, as this is an important source of mortality throughout the species' range.

BRD 3. *Grasshopper Sparrow (Ammodramus savannarum)*
The resource specialist notes that the grasshopper sparrow "is not known to occur in the Potrero Hills based on recent surveys." The Grasshopper Sparrow has not been observed within the project area; therefore, the landfill does not intend to create suitable habitat for this species.

Although this species has not been recorded in the Potrero Hills, this may reflect the degraded condition of non-native annual grassland in that area. Given other recommendations for improving grazing management and restoring native grasslands, it might be possible to create suitable habitat for the Grasshopper Sparrow without (or with limited) additional expense or alternative management strategies. The potential for enhancement of habitat for a species that has suffered decline is worth considering, even if it is not required as a mitigation measure. If so, it would be best to restore native grasslands far from the Landfill to lessen the potential impact of nest parasitism on the sparrows by Brown-headed Cowbirds foraging at the Landfill.

BRD 4. *Additional Special-Status Species in Suisun Marsh Potentially Affected by Landfill Activities. The report's prior references to corvid activities in proximity to the landfill and other areas of the region cite that there is an absence of substantive information with which to make meaningful determinations. Accordingly, the last sentence of this paragraph should be revised to remove the words "known and".*

No wording was changed. The sentence including "known and" refers to the overall discussion of the impacts of subsidized predators on other species, including special-status species, reported in the literature. Some of these impacts are documented and hence are "known"; others are potential impacts.

Indirect Project Effects

BRD 5. *Impacts of Subsidized Predators*
The reviewer identified this issue as one of the main concerns for this project. Although reasonable, the problem would appear to occur in any setting in which the landfill is placed in the County. The presence of the recently discovered colonies of listed species makes the proximity of the landfill of greater concern, but both landfills in the county are located in proximity to the colonies. Absence of a landfill in the Potrero Hills may cause a slight reduction in the number of corvids in the region but, given their long flight distances, the colonies would be at risk from any landfill placed in the southern portion of the county. The reviewer describes a proposal to conduct scientific studies of the subsidized corvids regionwide, but such a study is beyond the scope of this project.

The Potrero Hills Landfill (PHLF) is about 16 km (10 mi) closer to the colonies of listed species in Suisun Marsh than the Hay Road Landfill;hence the augmentation of corvids (ravens and crows) at PHLF would be much more likely to affect listed species in Suisun Marsh than comparable augmentation of corvids at the Hay Road Landfill. Effects of ravens on other species likely would diminish with distance from the landfill. Placement of this or any other landfill within the county should be evaluated with respect to its size (the amount of food available to subsidized predators) and with respect to its proximity to special-status species at risk from an increase in subsidized predators. Not all landfills would have the same impact.

Given the uncertainty regarding the level of augmentation of corvids at PHLF at its current size and the resulting impact of corvids on special-status species, and the likelihood that this problem will increase as the tonnage of garbage delivered to the landfill increases over time, it would be valuable to conduct more studies to better understand the potential impact of a greatly expanded landfill on nesting bird species. These studies need not be conducted "regionwide." Emphasis should be placed first on understanding the impacts of corvids using PHLF and secondly on determining how corvids are affected by two landfills in the general vicinity. In this regard, it would be valuable to determine whether abatement of corvids at PHLF only shifts the problem to the other landfill and thus affects species or populations closer to the Hay Road Landfill rather than at PHLF. I defer judgment to BCDC or other regulatory agencies as the whether further studies of the impacts of subsidized predators are within the scope of the project.

BRD 6. *Cowbird Parasitism*
The resource specialist notes that "of potential special-status species in question, only the Song Sparrow and Grasshopper Sparrow are particularly susceptible to cowbird parasitism." According to information provided by the resource specialist, the Song Sparrow is restricted to tidal marshes in the Suisun March area. The nearest tidal marshes are located 1 mi away, while the Song Sparrow is known to travel only a short distance from its nest. As the resource specialist mentioned in an earlier section of the Third Party Review Document, the Grasshopper Sparrow "is not known to occur in the Potrero Hills based on recent surveys." Based on the lack of suitable habitat in the vicinity of the project area, cowbird parasitism is not anticipated to affect special-status avian species.

The issue with respect to cowbird parasitism is not how far the potential host species move but rather how far the cowbirds commute from abundant food sources, such as a landfill, out to areas occupied by potential hosts for the eggs the cowbirds lay in the nests of other species. As noted in Chapter 5, p. 5-13, "cowbirds can 'commute' daily up to 6.7 km (4 mi) from key foraging sites to areas with abundant host populations." Hence, the cowbirds can easily reach areas where Suisun Song Sparrows nest in Suisun Marsh. Although Grasshopper Sparrows have not been recorded in the Potrero Hills, they could be affected by cowbirds if the sparrows occur elsewhere within the 4-mi radius that cowbirds are capable of moving on a daily basis.

Evaluation of the Mitigation Program

BRD 7. *Effects of Sea Level Rise*
BCDC has not, to our knowledge, defined climatological projections regarding sea-level rise within the secondary marsh zone.

In November 2006, BCDC initiated such a planning process, which includes depiction of the potential general effects of sea-level rise in key areas around the Bay (BCDC 2007). The Potrero Hills area was not depicted in the online version of this report, but it is clear from review of maps of other Bay regions that sea-level rise poses a substantial potential for impacts in many areas, including effects to natural habitats and existing and proposed mitigation areas. This analysis supports my judgment that, for any project with an extended long-term impact into the future, like the proposed landfill expansion, the analyses of impacts should include both conditions now and those projected to occur over the life of the project.